

WHAT IS CLAIMED IS:

1. A color cathode-ray tube comprising an in-line electron gun,
wherein side beams of three electron beams pass through localized
5 barrel magnetic fields formed, in a direction substantially perpendicular to
an in-line plane, corresponding to the side beams, respectively, and cross-
sectional shapes of the side beams are varied so that the cross-sectional
shape of one of the side beams is horizontally or vertically elongated to a
higher degree than that to which the cross-sectional shape of the other of the
10 side beams is.
2. A color cathode-ray tube comprising an in-line electron gun,
wherein at an end, on a screen side, of the electron gun, two pairs of
members for generating a magnetic field are placed above and below side
15 beams of three electron beams so as to sandwich them, respectively, and
between each of the two pairs of members for generating a magnetic
field, a localized barrel magnetic field is formed to vary cross-sectional
shapes of the side beams so that the cross-sectional shape of one of the side
beams is horizontally or vertically elongated to a higher degree than that to
20 which the cross-sectional shape of the other of the side beams is.
3. The color cathode-ray tube according to claim 2, wherein a strength
of the localized magnetic field formed between each of the two pairs of
members for generating a magnetic field varies depending on a level of
25 horizontal deflection.
4. The color cathode-ray tube according to claim 2, wherein the
localized magnetic field formed between each of the two pairs of members for
generating a magnetic field is induced by a horizontal deflection magnetic
30 field generated by a deflection yoke.
5. The color cathode-ray tube according to claim 2, wherein the two
pairs of members for generating a magnetic field have plate-like magnetic
bodies placed in planes perpendicular to an in-line direction and parallel to a
35 direction in which the three electron beams travel, and
the plate-like magnetic bodies are positioned in locations shifted
inward from planes passing through central axes of the side beams.

6. The color cathode-ray tube according to claim 5, wherein ends, on a side of the electron beams, of the plate-like magnetic bodies are bent and planes parallel to the in-line direction are formed.

5 7. The color cathode-ray tube according to claim 2, wherein the two pairs of members for generating a magnetic field are four substantially V-shaped magnetic pieces attached to an inner face of a cylindrical body.

10 8. The color cathode-ray tube according to claim 2, wherein a further pair of members for generating a magnetic field is placed above and below a center beam of the three electron beams so as to sandwich it, thus allowing a localized barrel magnetic field to act on the center beam.

15 9. A color cathode-ray tube comprising an in-line electron gun, wherein at an end, on a screen side, of the in-line electron gun, two pairs of plate-like members are placed above and below side beams of three electron beams so as to sandwich them, respectively,

20 the two pairs of plate-like members have plate-like magnetic bodies placed in planes perpendicular to an in-line direction and parallel to a direction in which the three electron beams travel, and

the plate-like magnetic bodies are positioned in locations shifted inward from planes passing through central axes of the side beams.

25 10. The color cathode-ray tube according to claim 9, wherein ends, on a side of the electron beams, of the plate-like magnetic bodies are bent and planes parallel to the in-line direction are formed.

30 11. The color cathode-ray tube according to claim 9, wherein the two pairs of plate-like members are four substantially V-shaped magnetic pieces attached to an inner face of a cylindrical body.

12. The color cathode-ray tube according to claim 9, wherein a further pair of plate-like members is placed above and below a center beam of the three electron beams so as to sandwich it, and

35 the further pair of plate-like members has plate-like magnetic bodies placed in a plane that is perpendicular to the in-line direction and passes through a central axis of the center beam.

13. A color cathode-ray tube apparatus comprising:
any one of the color cathode-ray tubes according to claims 1, 2, and
-9; and
a deflection yoke for generating a pincushion-type horizontal
5 deflection magnetic field and a barrel-type vertical deflection magnetic field.